

**Abstract**

A method and system for producing tomosynthetic images of a patient's breast. An x-ray source that delivers x-rays through a breast immobilized and compressed between a compression paddle and a breast platform and form an image at a digital x-ray  
5 receptor panel. Multiple x-ray images are taken as the x-ray source and the receptor move relative to the immobilized breast. In one preferred embodiment, the x-ray source travels from  $-15^{\circ}$  to  $+15^{\circ}$ . The source can travel in an arc around the breast while the receptor travels linearly while remaining parallel and at the same distance from the breast platform. The sets of x-ray image data taken at different angles are  
10 combined to form tomosynthetic images that can be viewed in different formats, alone or as an adjunct to conventional mammograms.